JUNIPER NETWORKS MEDIA FLOW PUBLISHER
A Media Flow Controller Applications

Product Overview

Shifting consumer viewing habits are reshaping the way content is delivered to subscribers. Users are increasingly expecting entertainment content to be available not just on their television, but also on a variety of other Internet-connected devices. Delivering premium content to these multiple screens represents a tremendous business opportunity; however, it also presents a number of technical challenges.

Media Flow Publisher is a Juniper Networks Media Flow Controller application that enables cable operators, IPTV providers, and content publishers to leverage their existing video infrastructure to cost-effectively extend the delivery of premium, high quality content to multiple end user devices.

Product Description

The advent of tablet PCs, large screen mobile devices, and increasingly ubiquitous wireless access is driving the consumption of premium video entertainment content out of the living room. Consumers increasingly desire and expect access to all types of content on any device, at any location, and at any time.

The ability to deliver content to multiple screens is rapidly becoming a requirement for broadband and television service providers such as cable and IPTV operators, as well as content providers themselves. However, delivering content to multiple devices over the Internet requires a different approach than that of traditional TV and video on demand (VOD). Variables in device capabilities and connection quality mean that multiscreen content delivery requires adaptive bit-rate streaming—the ability of the video to adjust in response to changing conditions. This typically means investment in costly, specialized encoders that directly support adaptive stream segmentation, and additional servers that provide the adaptive stream packaging and metadata publishing.

Juniper Networks® Media Flow Publisher is an optional application that enables the Juniper Networks Media Flow Solution to perform adaptive stream segmentation, stream packaging, metadata publishing, and adaptive stream format translation. Media Flow Publisher enables network operators and content providers to leverage their existing TV and video encoding infrastructure for adaptive stream production, eliminating the need for specialized encoders and servers.

With Media Flow Publisher, customers can more rapidly and cost-effectively introduce new services that capitalize on delivering content to multiple screens.

Architecture and Key Components

An optional application within Media Flow, Media Flow Publisher complements and extends the capabilities of Media Flow Controller. Media Flow Controller is innovative content delivery and caching software that enables customers to deliver and distribute rich media with maximum performance, efficiency, and scale. Customers using Media Flow Controller can leverage Media Flow Publisher to add adaptive stream publishing capabilities to their content delivery and caching solution.

Figure 1 illustrates how Media Flow Publisher fits within the Media Flow Solution. For more details on Media Flow Controller and the entire Media Flow Solution, please refer to the solution datasheet at **www.juniper.net/us/en/local/pdf/datasheets/1000316-en.pdf**.
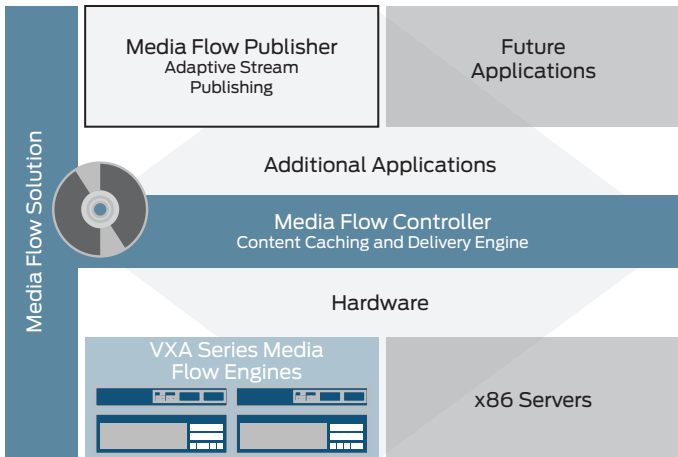

Figure 1: Media Flow Publisher is an optional application with Media Flow

Media Flow Publisher provides HTTP adaptive stream content segmentation, packaging, and metadata support for industry-leading formats, including Apple HTTP Adaptive Streaming, Microsoft Smooth Streaming (Silverlight), and Adobe HTTP Dynamic Streaming (Flash). Media Flow Publisher can ingest multiple H.264 video streams or files (live or on demand) and publish the content for adaptive stream delivery, with the associated metadata, in any of these formats. Additionally, Media Flow Publisher can convert content between Microsoft, Adobe, and Apple adaptive stream formats.

By consolidating the publishing and delivery of multiple adaptive streaming formats on a single platform, Media Flow Publisher reduces the need for extra servers in the network, lowering costs and enabling customers to more efficiently deliver content to multiple screens. Cable operators, IPTV providers, and content producers and distributors can grow revenue and increase subscriber satisfaction by delivering content to new devices in new ways.

Figure 2 below illustrates examples of how Media Flow Publisher can be deployed.

Features and Benefits

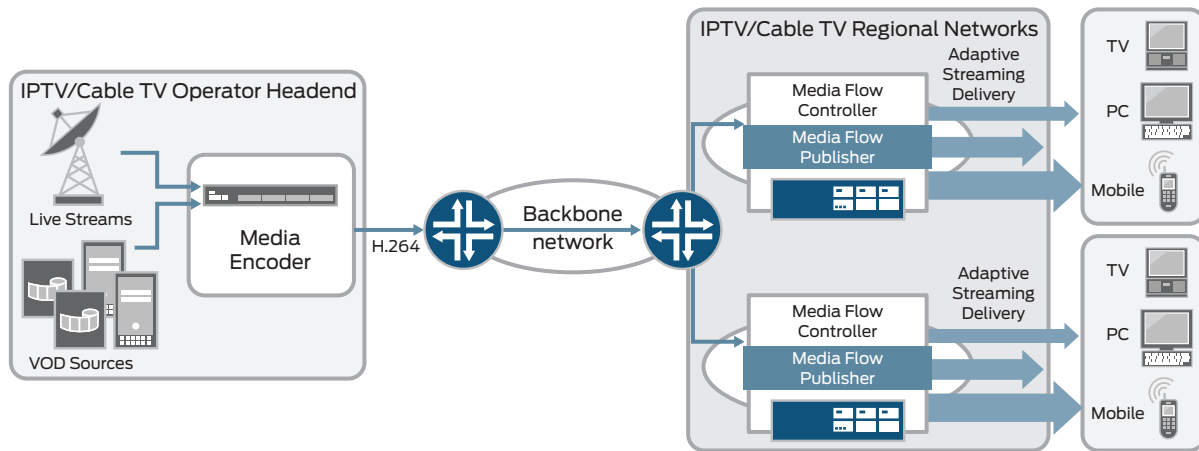| Feature	Description	Benefits
Content segmentation and packaging	Ingests H.264-encoded multi bit rate video streams and publishes in adaptive delivery format	· Eliminates need for specialized adaptive encoders · Reduces capital and operational expense · Protects investment in standard video encoders
Converged format support	Support for all major adaptive streaming formats, including Apple, Adobe, and Microsoft	Reduces TCO by consolidating the delivery of multiple adaptive stream methods in one server
Format translation	Ability to convert between Microsoft, Adobe, and Apple adaptive stream formats with metadata	Facilitates delivery to multiple end user devices and types
Live and VOD publishing	Supports publishing for both live steaming and VOD file assets	Enables converged infrastructure for multiple services and content types

Figure 2: Cable operators and IPTV providers can deploy Media Flow Publisher in the edge. By performing the stream segmentation and packaging at the edge, the amount of traffic across the network is reduced.
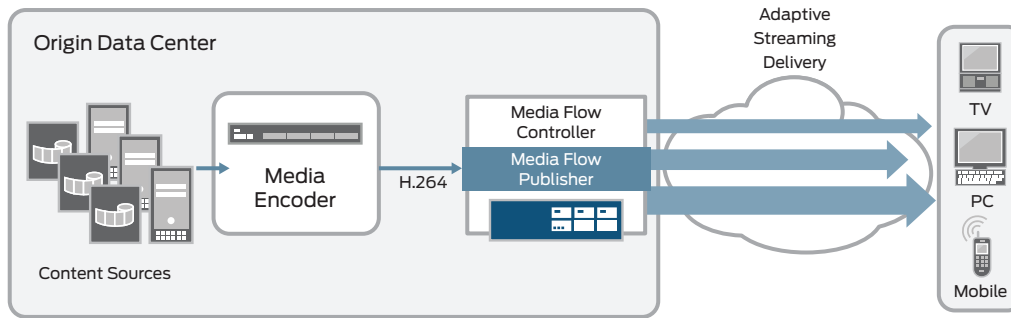
Figure 3: For content providers, Media Flow Publisher performs the stream segmentation and packaging in the origin data center before content is delivered across the Internet.

Media Flow Publisher Specifications

Software requirements
- Must be deployed in conjunction with Media Flow Controller

Hardware options
- Juniper Networks VXA Series Media Flow Engine
- Select x86-64 server families with at least 4 GB of RAM (including Dell PowerEdge, HP ProLiant BL/DL series G5/G6, IBM X Series, Super Micro DP Xeon Series, Sun X4100 Series, and more)

Live publishing performance
- Up to 100 simultaneous streams per VXA Series Media Flow Engine

Adaptive stream formats
- Apple HTTP Adaptive Streaming (iPhone/iPad), Microsoft Smooth Streaming (Silverlight), Adobe HTTP Dynamic Streaming (Flash)

Codecs
- H.264 AVC/AAC, VC-1 (ISMV file sources only)

Live stream formats
- MPEG2TS/UDP/IP

VOD file formats
- ISMV, MPEG.TS, F4X/F4F

Juniper Networks Services and Support

Juniper Networks is the leader in performance-enabling services that are designed to accelerate, extend, and optimize your high-performance network. Our services allow you to maximize operational efficiency while reducing costs and minimizing risk, achieving a faster time to value for your network. Juniper Networks ensures operational excellence by optimizing the network to maintain required levels of performance, reliability, and availability. For more details, please visit **www.juniper.net/us/en/ products-services**.

Ordering Information

Media Flow Publisher must be deployed in conjunction with Media Flow Controller. For information on ordering Media Flow Controller, please refer to the product datasheet at **www.juniper.net/us/en/ local/pdf/datasheets/1000316-en.pdf**.

About Juniper Networks

Juniper Networks is in the business of network innovation. From devices to data centers, from consumers to cloud providers, Juniper Networks delivers the software, silicon and systems that transform the experience and economics of networking. The company serves customers and partners worldwide. Additional information can be found at **www.juniper.net**.

To purchase Juniper Networks solutions, please contact your Juniper Networks representative at 1-866-298-6428 or authorized reseller.

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